ENCLOSURE: TECHNICAL SUPPORT DOCUMENT FOR EPA CONCURRENCE ON 24-HOUR $PM_{2.5}$ EXCEEDANCES MEASURED AT ROSE PARK IN SALT LAKE COUNTY, UTAH SEPTEMBER 2017, AS EXCEPTIONAL EVENTS

EXCEPTIONAL EVENTS RULE REQUIREMENTS

The EPA promulgated the Exceptional Events Rule (EER) in 2007, pursuant to the 2005 amendment of Clean Air Act (CAA) section 319. In 2016, the EPA finalized revisions to the EER. The 2007 EER and the 2016 revisions added 40 CFR 50.1(j)-(r), 50.14 and 51.930 to the Code of Federal Regulations (CFR). These sections contain definitions, criteria for EPA approval, procedural requirements and requirements for air agency demonstrations. The EPA reviews the information and analyses in the air agency's demonstration package using a weight of evidence approach and decides to concur or not concur. The demonstration must satisfy all of the EER criteria for the EPA to concur with excluding the air quality data from regulatory decisions.

Under 40 CFR 50.14(c)(3)(iv), the air agency demonstration to justify data exclusion must include:

> A. "A narrative conceptual model that describes the event(s) causing the exceedance or violation and a discussion of how emissions from the event(s) led to the exceedance or violation at the affected monitor(s)";
> B. "A demonstration that the event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation";
> C. "Analyses comparing the claimed event-influenced concentration(s) to concentrations at the same monitoring site at other times" to support requirement (B) above;
> D. "A demonstration that the event was both not reasonably controllable and not reasonably preventable"; and
> E. "A demonstration that the event was a human activity that is unlikely to recur at a particular location or was a natural event."

A natural event is defined in 40 CFR 50.1(k) as "an event and its resulting emissions, which may recur at the same location, in which human activity plays little or no direct causal role. For purposes of the definition of a natural event, anthropogenic sources that are reasonably controlled shall be considered to not play a direct role in causing emissions."

In addition, the air agency must meet several procedural requirements, including:

1. Submission of an Initial Notification of Potential Exceptional Event and flagging of the affected data in the EPA's Air Quality System (AQS) in accordance with 40 CFR 50.14(c)(2)(i);
2. Completion and documentation of the public comment process in accordance with 40 CFR 50.14(c)(3)(v); and
3. Implementation of any applicable mitigation requirements in accordance with 40 CFR 51.930.

For data influenced by exceptional events to be used in initial area designations, air agencies must also meet the initial notification and demonstration submission deadlines specified in Table 2 to 40 CFR 50.14.

Narrative Conceptual Model

A wildfire is defined in 40 CFR 50.1(n) as "any fire started by an unplanned ignition caused by lightning; volcanoes; other acts of nature; unauthorized activity; or accidental, human-caused actions, or a prescribed fire that has developed into a wildfire. A wildfire that predominantly occurs on wildland is a natural event." Wildland is defined in 40 CFR 50.1(o) as "an area in which human activity and development are essentially non-existent, except for roads, railroads, power lines, and similar transportation facilities. Structures, if any, are widely scattered."

The EPA expects that a narrative conceptual model of the event will describe and summarize the event in question and provide context for analyzing the required statutory and regulatory technical criteria. Air agencies may support the narrative conceptual model with summary tables, satellite images, maps, etc. For high particulate matter events resulting from wildland fires, the EPA recommends that the narrative conceptual model discuss the interaction of emissions and meteorology and, under 40 CFR 50.14(a)(1)(i), the regulatory significance of the requested data exclusion.

Clear Causal Relationship (CCR) and Supporting Analyses

The EPA considers a variety of evidence when evaluating whether there is a clear causal relationship between the specific event and the monitored exceedance or violation. For high particulate matter concentrations resulting from wildland fires, air agencies should compare the relevant particulate matter data requested for exclusion with historical concentrations at the affected air quality monitor to establish a clear causal relationship between the event and the monitored data. In addition to providing this information on the historical context for the event-influenced data, air agencies should further support the clear causal relationship criterion by providing evidence that the wildfire's emissions were transported to the monitor and that the emissions from the wildfire influenced the monitored concentrations.

Not Reasonably Controllable or Preventable (NRCP)

The EPA requires that air agencies establish that the event be both not reasonably controllable and not reasonably preventable at the time the event occurred. This requirement applies to both natural events and events caused by human activities; however, if the event was caused by a wildfire on wildlands, it will be presumed that both "not reasonably controllable or preventable" elements have been met, unless evidence in the record clearly demonstrates otherwise. See 40 CFR 51.14(b)(4).

Natural Event or Event Caused by Human Activity That is Unlikely to Recur

According to the CAA and the EER, an exceptional event must be "an event caused by human activity that is unlikely to recur at a particular location *or* a natural event" (emphasis added). The 2016 EER includes in the definition of wildfire that "[a] wildfire that predominantly occurs on wildland is a natural event." Once an agency provides evidence that a wildfire on wildland occurred and demonstrates that there is a clear causal relationship between the measurement under consideration and the event, the EPA expects minimal documentation to satisfy the "human activity that is unlikely to recur at a particular location or a natural event" element. The EPA will address wildfires on other lands on a case-by-case basis.

EPA REVIEW OF EXCEPTIONAL EVENT DEMONSTRATION

Overview of Events

This Technical Support Document (TSD) covers an exceedance of the 24-hour $PM_{2.5}$ National Ambient Air Quality Standard (NAAQS) recorded by three monitors at the Rose Park monitoring station in Salt Lake County, Utah, on September 6, 2017. The primary monitor at the station recorded a 24-hour average $PM_{2.5}$ of 36.8 $\mu g/m^3$, and collocated monitors recorded $PM_{2.5}$ of 37.7 and 37.8 $\mu g/m^3$ on that date. The Utah Department of Environmental Quality's Division of Air Quality (DAQ) submitted an exceptional events demonstration to address September 2017 exceedances at several Utah $PM_{2.5}$ monitoring stations. $PM_{2.5}$ exceedances in September 2017 at the Smithfield monitor included in the demonstration have previously received EPA concurrence as wildfire exceptional events in June 2018. See 83 FR 52893 (October 19, 2018). As the exceedance at Rose Park now has regulatory significance for a proposed clean data determination for the Salt Lake City $PM_{2.5}$ nonattainment area, the EPA is now considering the demonstration for that exceedance.

DAQ submitted an Initial Notification of Potential Exceptional Event for the September 6, 2017 exceedance via email on February 2, 2019. The September demonstration was posted for public comment for 30 days, from November 15 to December 15, 2017, and DAQ received no comments. The EPA received the September demonstration on January 9, 2018.

Narrative Conceptual Model

The Great Salt Lake lies in the low point of the Great Basin, with no low elevation outlets. In other words, terrain surrounding the Great Salt Lake and Salt Lake City is higher in all directions. Because the Salt Lake valley is surrounded by higher topographic features, air tends to stagnate in the valley during times of stable atmospheric conditions, especially during strong wintertime inversions, but also in summer under high pressure systems. As a result of this stagnation, as well as the climate and air pollution, the Salt Lake valley has historically experienced high levels of air particulates, especially in the wintertime (December through the end of March). Data to support this statement is included in the Historical Data for Context section of this TSD.

In the summers, stagnation is generally not as strong and persistent as during winter inversions, and as a result, generally summers record much lower air particulate concentrations than in winter episodes. Elevated $PM_{2.5}$ concentrations in the summer months are possible, particularly when smoke is transported to the area from wildfires in the region, during high wind dust storms, and when fireworks are used in July 4 celebrations. High values in summer are rare in the absence of these event causes. The September demonstration suggests that wildfire smoke was the cause of the September exceedance.

September 5 – 7, 2017

Dry and hot conditions persisted throughout August and into September 2017. As a result, numerous large wildfires started or continued to burn throughout the western and northwestern United States and western Canada leading up to and during the September 5 – 7 event. In fact, "as of September 6, there

were 65 ongoing fires across the United States according to the National Interagency Fire Center, all of which were located in the western United States."[1]

DAQ's September demonstration provides a narrative of how smoke from wildfires across the west was transported to Utah between September 5 and September 7, 2017. This smoke resulted in exceedances of the 24-hour $PM_{2.5}$ NAAQS at stations throughout the northern part of Utah, as well as in California, Oregon, Washington, Idaho and Montana. The demonstration included a number of figures of the location of fires in the western United States and Canada, as well as NOAA HMS smoke plume maps (Figure 1 through Figure 3).

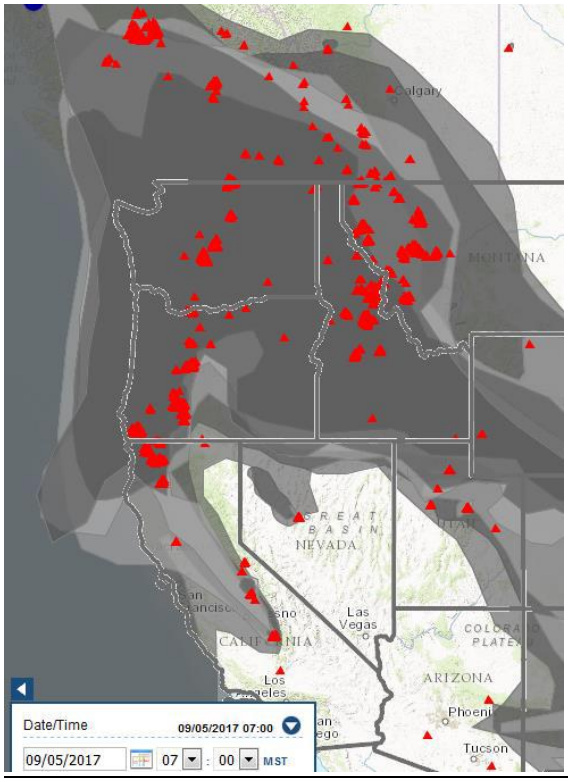

Figure 1. Fire locations and NOAA HMS smoke plume map for September 5, 2017

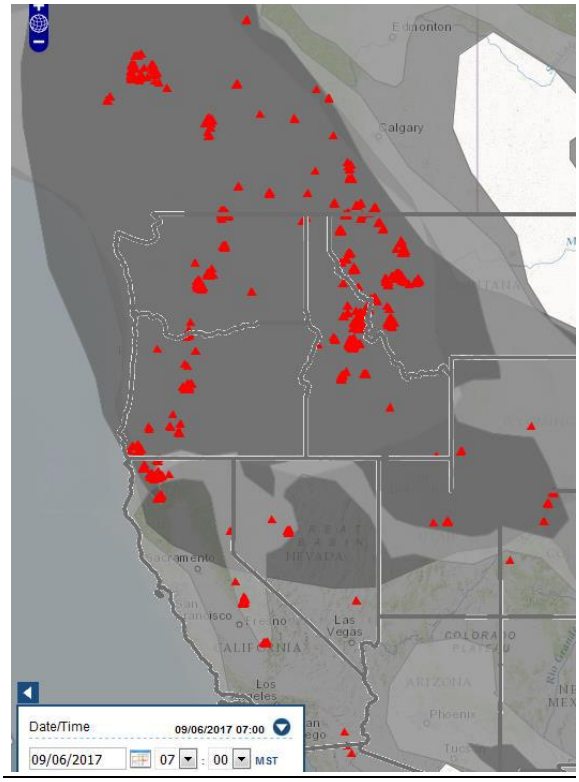

Figure 2. Fire locations and NOAA HMS smoke plume map for September 6, 2017

[1] Di Liberto, Tom (2017, September 7). "Massive fires burning across the West in September 2017." Retrieved from https://www.climate.gov/news-features/event-tracker/massive-fires-burning-across-west-september-2017. Accessed on March 27, 2019.

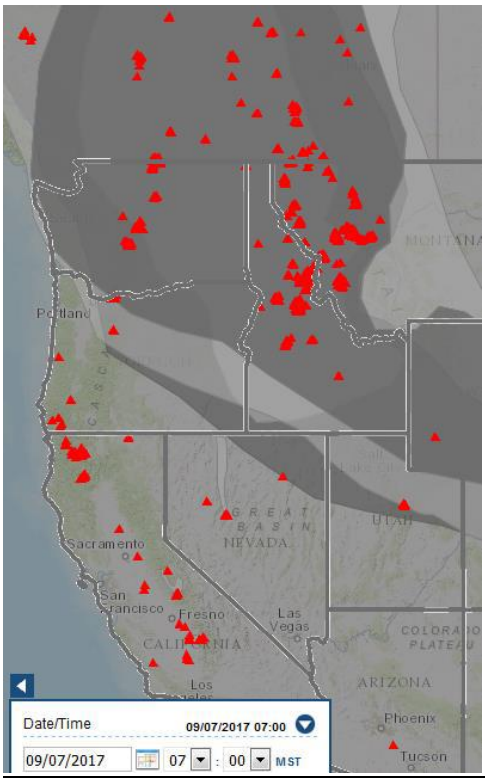

Figure 3. Fire locations and NOAA HMS smoke plume map for September 7, 2017

Regulatory Significance

Neither the Initial Notification e-mail nor the demonstration for the September events indicated the regulatory significance of the exceptional events. Subsequent to the initial notification, DAQ indicated by phone on February 7, 2019, that the September 6 flagged exceedance at Rose Park was significant in its impact on calculating an attaining 2016-2018 $PM_{2.5}$ design value for use in a clean data determination request for the Salt Lake City 24-hour $PM_{2.5}$ nonattainment area (NAA).

In 2006, the EPA strengthened the 24-hour $PM_{2.5}$ NAAQS from 65 $\mu g/m^3$ to 35 $\mu g/m^3$. In 2009, 3 years following the NAAQS revision, areas were designated, and all or parts of Box Elder, Weber, Davis, Salt Lake and Tooele counties in Utah were designated non-attainment as the Salt Lake City $PM_{2.5}$ NAA. The area was initially classified as a Moderate $PM_{2.5}$ nonattainment area under CAA subpart 4, part D, title I, and it was reclassified to Serious nonattainment in June 2017 when it did not attain the standard by the Moderate area attainment date. Under 40 CFR 51.1015, the EPA can suspend certain Moderate and/or Serious area planning requirements when the EPA has determined that the area is attaining the NAAQS ("clean data determination").

The Rose Park monitor was installed in April of 2007, and it had its first valid design value (the 3-year average of annual 98th percentile 24-hour $PM_{2.5}$) in 2009. From 2009 through the 2018 design value (the average of 2016-2018 data), Rose Park has had a violating design value every year except 2012, when the design value equaled the NAAQS at 35 $\mu g/m^3$. In 2017, however, the nominal 98th percentile value corresponds to the 8th maximum value, 35.8 $\mu g/m^3$, recorded on January 31, 2017. The 4th maximum in 2017, however, is 40.0 $\mu g/m^3$ recorded on July 4 and flagged as a firework exceptional event (addressed in a separate concurrence) and the 6th maximum is 36.8 $\mu g/m^3$ for September 6, addressed herein. If both these exceptional event claims receive EPA concurrence, the 2017 98th percentile drops to the current

10^{th} maximum value (32.4 $\mu g/m^3$ recorded on both December 10 and 29), and the resulting 2016-2018 design value goes from a violating 36 $\mu g/m^3$ to an attaining 35 $\mu g/m^3$. Beginning in 2017, all other monitors in the Salt Lake City NAA have attained the NAAQS, so using exceptional event concurrences to make the Rose Park monitor attain, results in attaining design values for all Salt Lake City NAA monitors in 2016-2018. The effect of concurring on both exceptional event claims is shown by the green line relative to the red line in Figure 4.

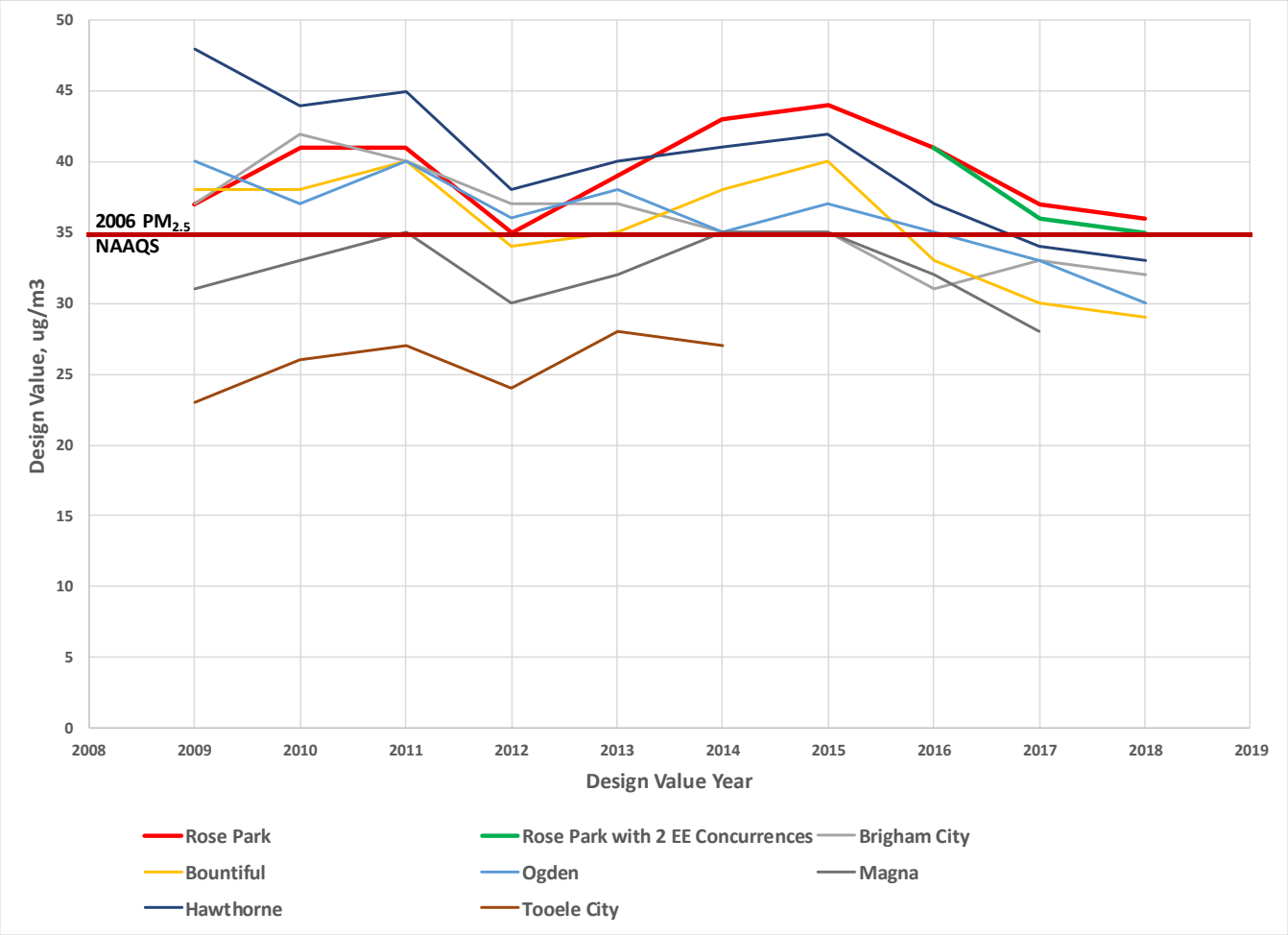

Figure 4. Salt Lake City Design Value History, 2009-2018; Rose Park in Red, Impact of Concurrence on July 4 and September 6, 2019 Flags Shown in Green

Clear Causal Relationship (CCR)

The following discussion on the clear causal relationship has been modified from DAQ's September demonstration.

The 24-hour and hourly average $PM_{2.5}$ time series for the Rose Park monitoring station in Figure 5 show elevated $PM_{2.5}$ levels corresponding with the smoke map projections starting September 5, 2017. This is consistent with other monitoring stations in northern Utah.

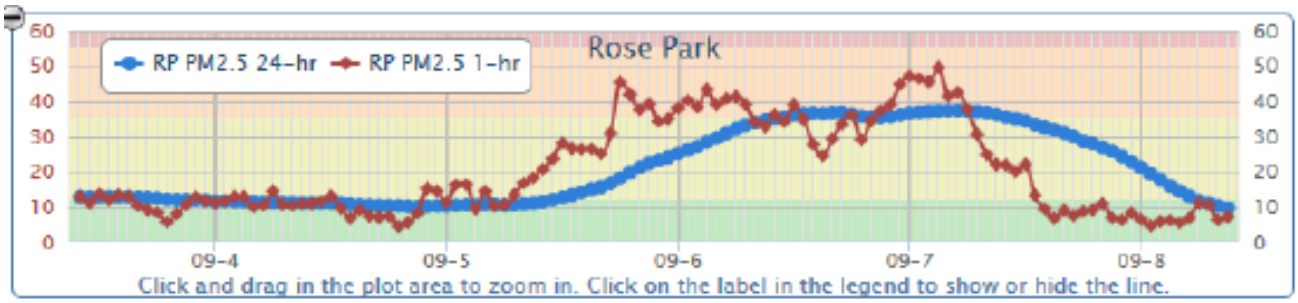

Figure 5. 24-hour and hourly average $PM_{2.5}$ concentrations at the Rose Park monitor from September 4 through September 8, 2017

The EPA Air Quality Index (AQI) maps from September 4 through 7 are below (Figure 6 through Figure 9). The AQI in northern Utah progressed from moderate air quality (yellow) to unhealthy for sensitive groups (orange) during this time period. The maps show continuity between the northern Utah degraded air quality and the upwind more severe air quality degradation (unhealthy and very unhealthy) in states closer to the wildfires.

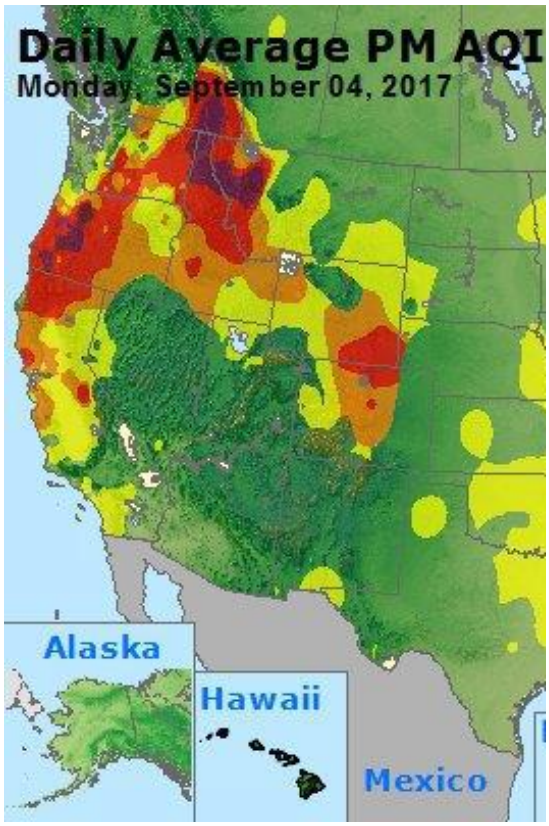

Figure 6. AirNow Daily AQI Map for September 4, 2017

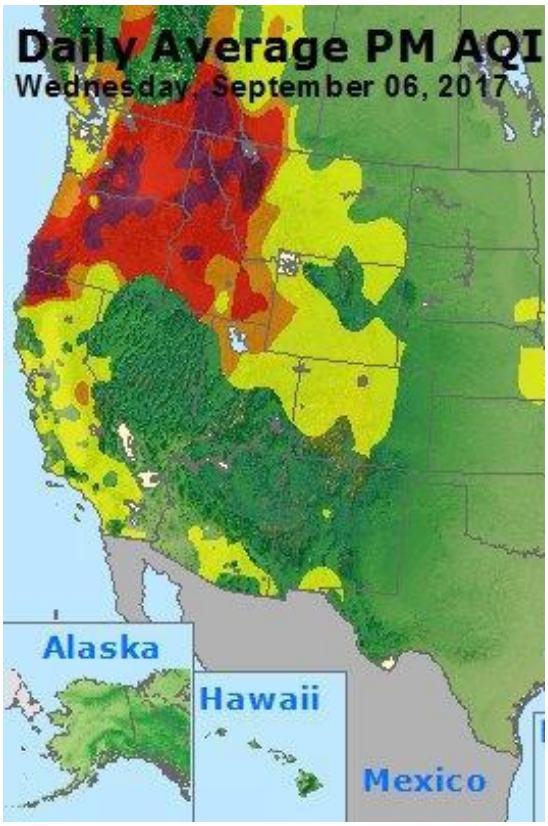

Figure 7. AirNow Daily AQI Map for September 6, 2017

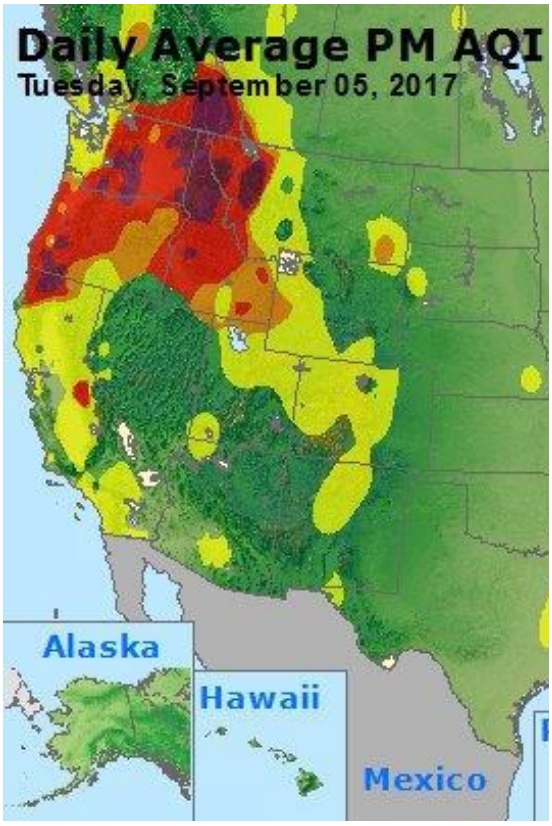

Figure 8. AirNow Daily AQI Map for September 5, 2017

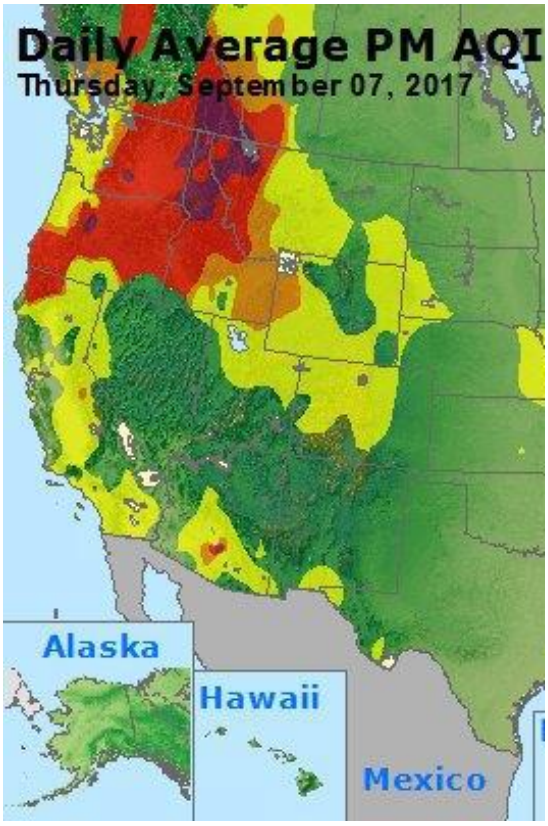

Figure 9. AirNow Daily AQI Map for September 7, 2017

On September 4, 2017, at 0600 MDT, a weak dry cold front was oriented from the northeast corner of Washington to the center of Wyoming, as can be seen in the surface weather maps (Figure 10). This cold front aided in fire intensification throughout Washington, Oregon and Idaho on September 4-5, in addition to transporting smoke-rich plumes from these states to the Wasatch Front and Cache Valley of Utah.

By the morning of September 5, 2017 (Figure 11), this cold front had stalled and further weakened into a stationary front, extending from northeast Oregon to west central Colorado (Figure 12 and Figure 13). The stalled boundary continued to facilitate transport from the fires in the Pacific Northwest to the Wasatch Front and Cache Valley, and the particulate values are seen to escalate during this time period.

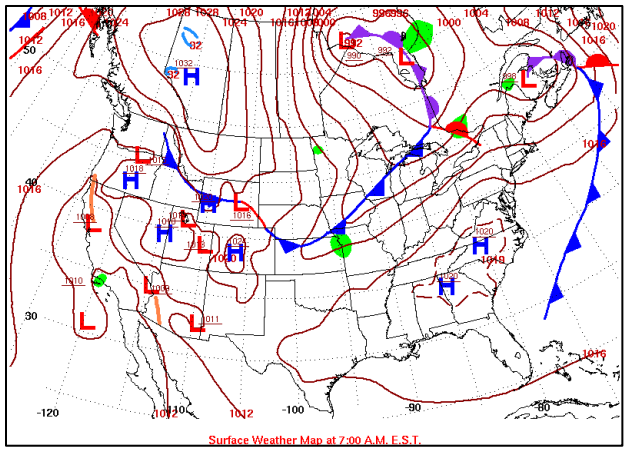

Figure 10. September 4, 2017 Surface Map

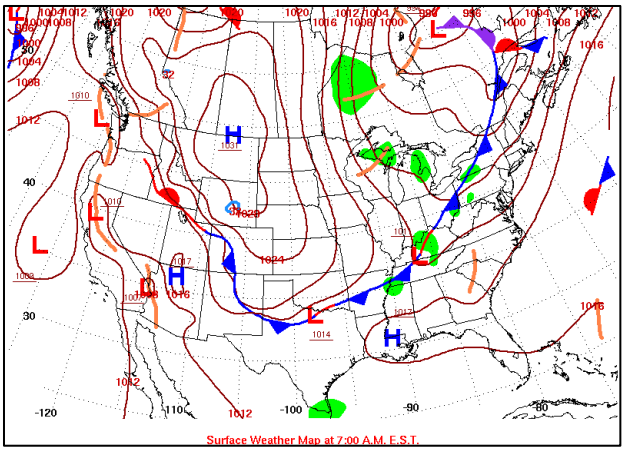

Figure 11. September 5, 2017 Surface Map

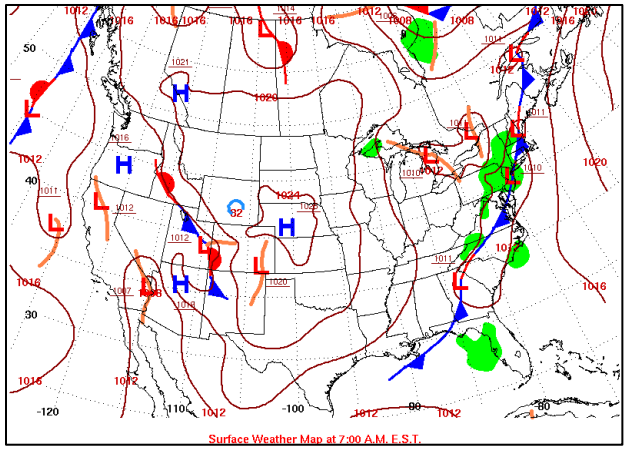

Figure 12. September 6, 2017 Surface Map

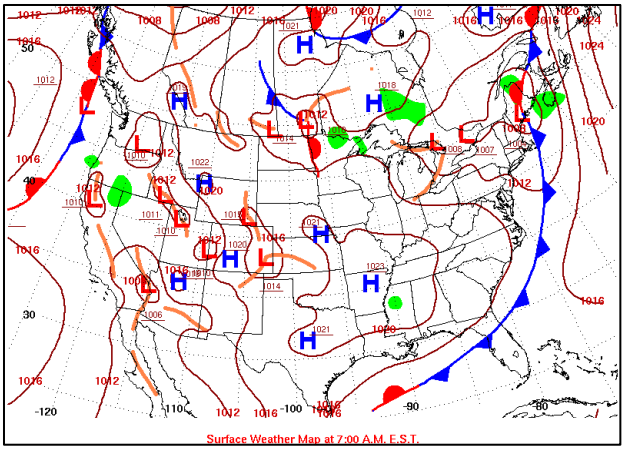

Figure 13. September 7, 2017 Surface Map

Extremely stable atmospheric conditions due to a high pressure ridge aided in the intensified particulate concentrations from September 4-7, as can be seen in the 500-mB height contour maps (Figure 14 through Figure 17). Additionally, because smoke was being transported at higher levels of the troposphere during this time period, diurnal mixing was not able to mix any clean air to the surface, as smoke was being entrained into the valleys of northeast Utah from above the boundary layer.

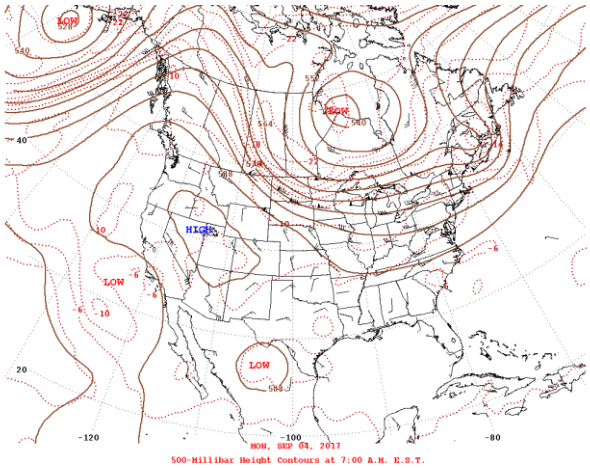

Figure 14. 500 mB Height Contour maps (September 4, 2017 6:00 AM MDT)

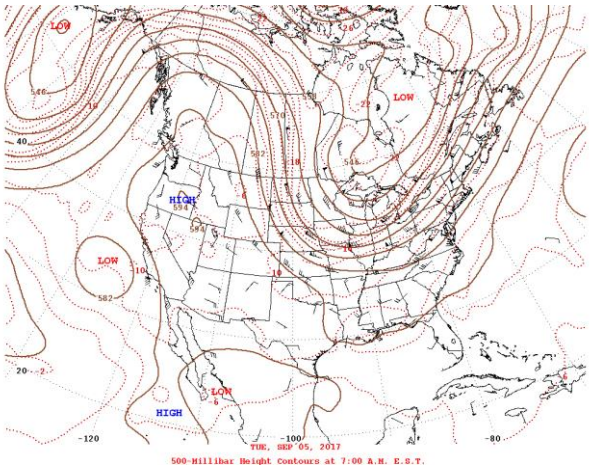

Figure 15. 500 mB Height Contour maps (September 5, 2017 6:00 AM MDT)

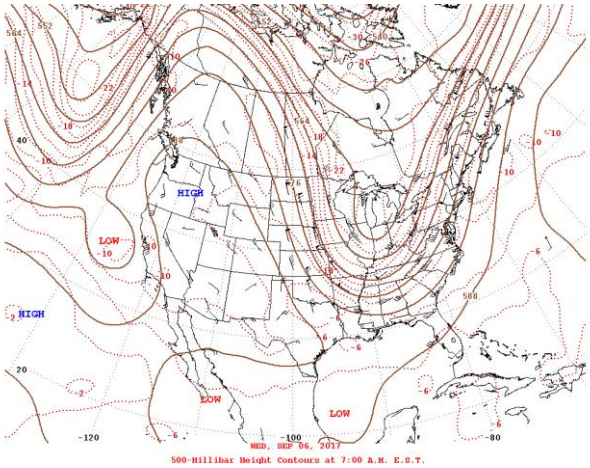

Figure 16. 500 mB Height Contour maps (September 6, 2017 6:00 AM MDT)

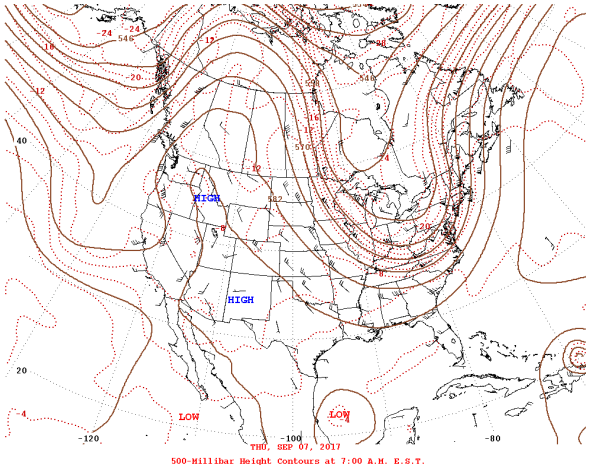

Figure 17. 500 mB Height Contour maps (September 7, 2017 6:00 AM MDT)

On September 8, 2017, the ridge began to shift to the east, allowing for southerly flow to transport smoke-free air from Arizona to the Wasatch front and Cache Valley (Figure 18). Particulate values were subsequently seen to drop, as seen in the $PM_{2.5}$ time series for each of the stations.

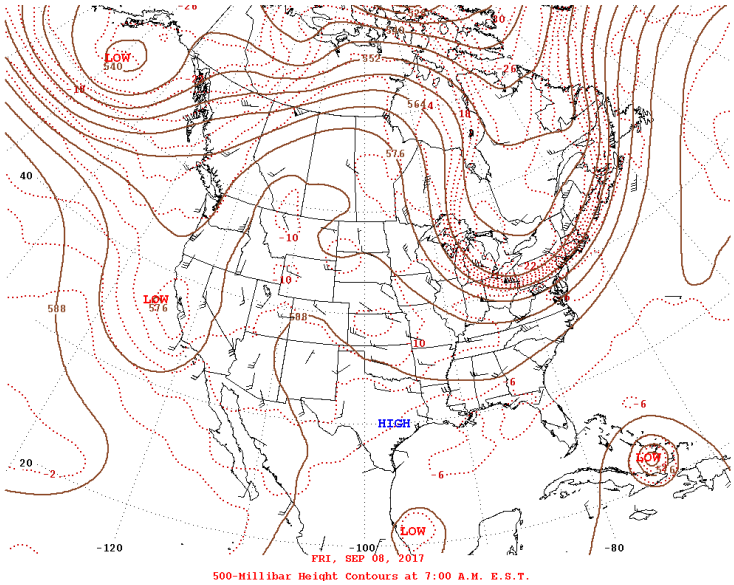

Figure 18. 500 mB Height Contour maps (September 8, 2017 6:00 AM MDT)

Smoke transport can be visually verified with MODIS satellite imagery (Figure 19 through Figure 21). In these figures, the red markers indicate active wildfire locations and the off-gray wisps are smoke plumes. Brilliant white areas are clouds.

Aerosol optical depth (AOD) is the degree to which aerosols prevent the transmission of light. When most particles are concentrated and well mixed in the boundary layer, satellite AOD measurements can provide supporting evidence of smoke. Smoke intensity is indicated by an increasing color scheme, with red as the maximum AOD. A series of AOD overlays on the MODIS satellite image for September 5 through September 7 are presented in Figure 22 through Figure 24.

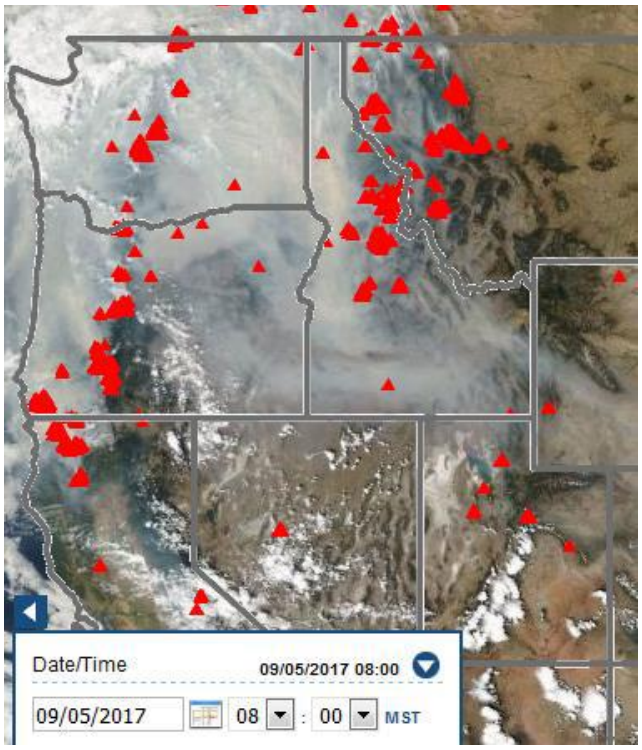

Figure 19. MODIS satellite imagery and wildfire locations for September 5, 2017

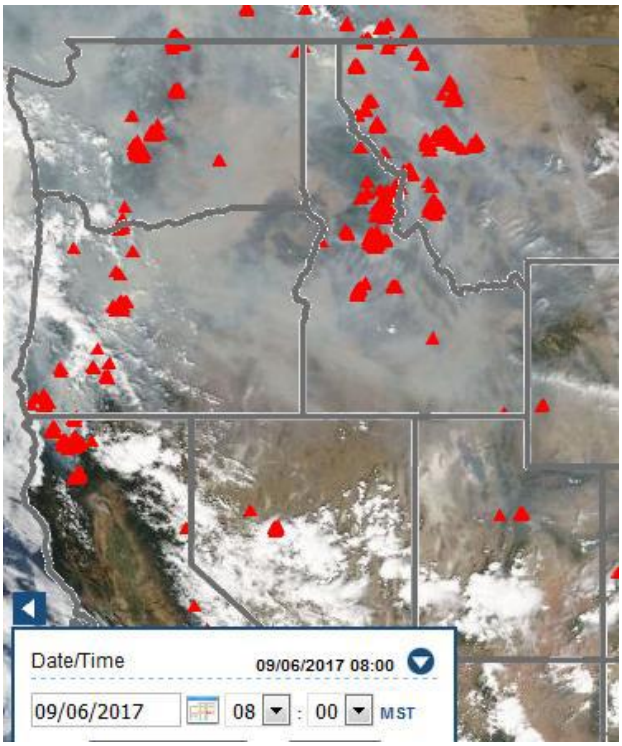

Figure 20. MODIS satellite imagery and wildfire locations for September 6, 2017

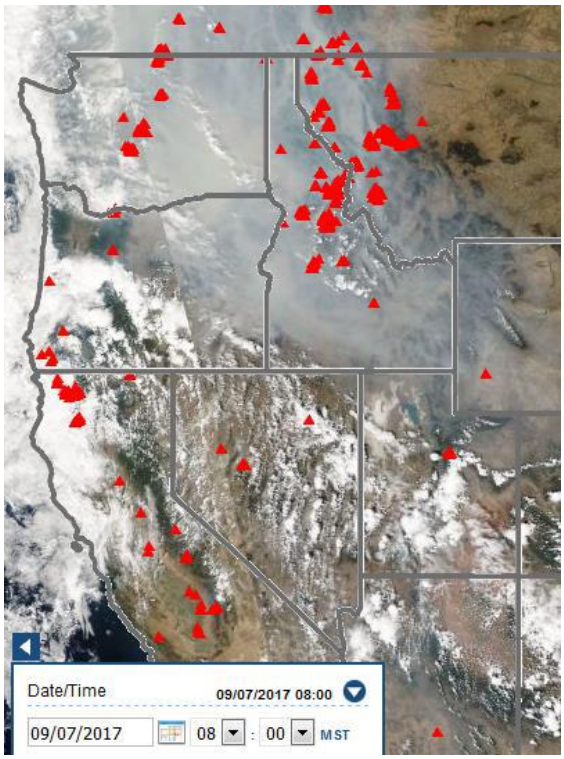

Figure 21. MODIS satellite imagery and wildfire locations for September 7, 2017

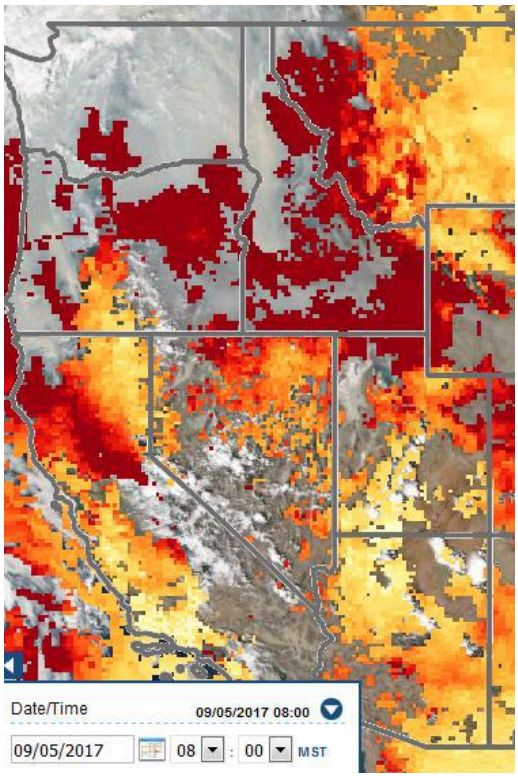

Figure 22. NASA MODIS Terra Aerosol Optical Depth for September 5, 2017

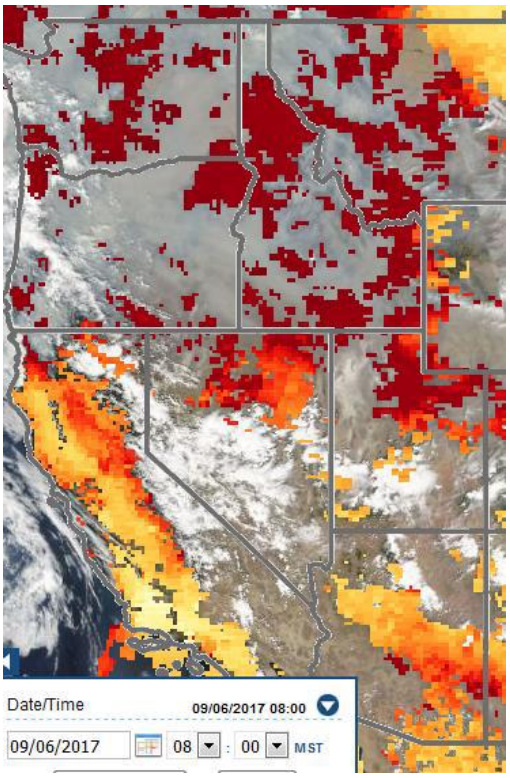

Figure 23. NASA MODIS Terra Aerosol Optical Depth for September 6, 2017

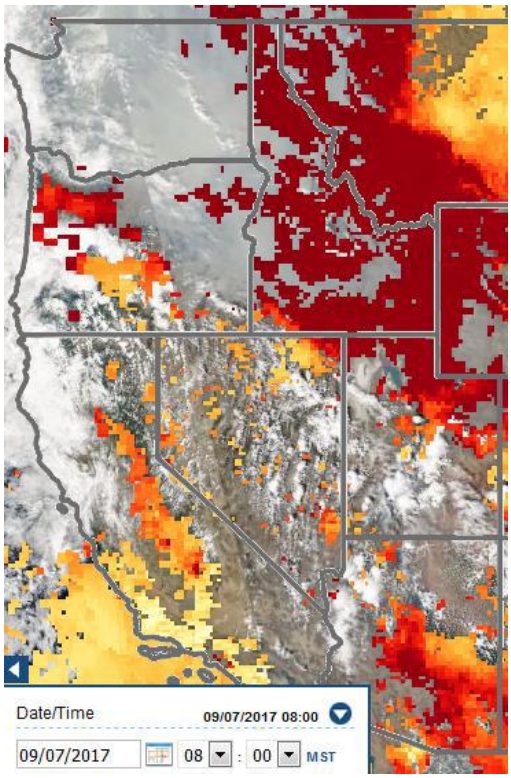

Figure 24. NASA MODIS Terra Aerosol Optical Depth for September 7, 2017

Satellite Remote Sensing of Air Quality using LIDAR

The Cloud-Aerosol Transport System (CATS) satellite uses light detection and ranging (LIDAR) to profile the vertical aerosols. The LIDAR sensor emits radiation directed toward the target to be investigated. The radiation reflected from that target is detected and measured by the sensor. CATS made a pass over the smoke plume areas (area circled in red) during this event on September 7, 2017. The black marking indicates smoke. Note the extensive area where smoke was detected (Figure 25).

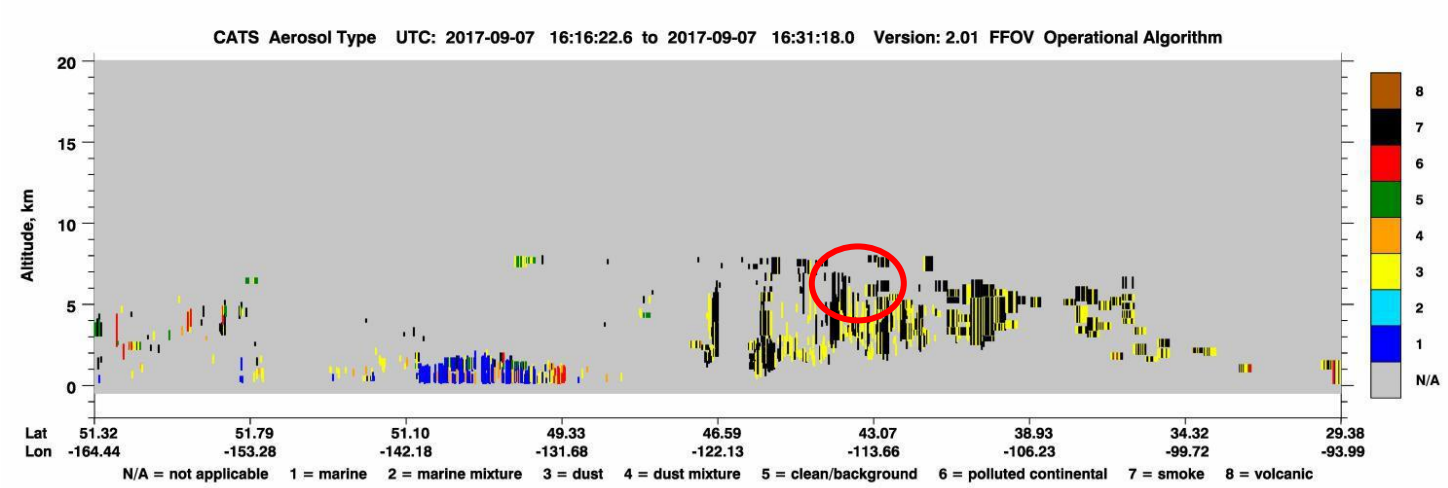

Figure 25. CATS aerosol reading September 7, 2017

Historical Data for Context

The Rose Park monitor started collecting data in 2007. In its demonstration for wildfire exceptional event claims for September 2017, Utah provided September 1 through 10 data from 2015-2017 to provide some historical context for the September 6, 2017 exceedance at Rose Park. The EPA provided guidance on preparing historical data comparisons in the preamble to the 2016 Exceptional Event Rule revision, recommending, among other methods, that at least 5-years of historical data be shown.[2] The EPA chose to conduct a more thorough analysis reflecting the guidance recommendation using all the historical data from Rose Park to supplement the information provided in the Utah demonstration.

As stated in the Narrative Conceptual Model section above, the Salt Lake Valley can experience strong temperature inversions in the winter months. When these inversions are strong and persistent enough, emissions in the valley can cause the 24-hour average $PM_{2.5}$ concentrations to exceed the NAAQS. As a result, the 24-hour average $PM_{2.5}$ concentrations are typically highest from approximately December 1 through March 31 each year (as seen in Figure 26). These high values cause the 99th percentile of the combined 2007 to 2018 24-hour $PM_{2.5}$ data to be 47 µg/m^3. This is useful in comparing the relative frequency of the subject flagged value on September 6, 2017 (36.8 µg/m^3) with the long term 99th percentile (occuring on average about 3 or 4 times per year). The flagged concentration, in a long term comparison, could be expected several times each year, so the clear causal relationship demonstration needs to be relatively robust, compared to that needed for a concentration well over the 99th percentile value.

[2] 81 FR 68242, Table 2, "Evidence and Analyses for the Comparison of Historical Data", October 3, 2016.

The historical data also show some elevated 24-hour $PM_{2.5}$ concentrations in the summer months. With the exception of 2018 data, all exceedances which have occurred between March 30 and September 30 at the Rose Park monitor have been flagged as exceptional events. This includes high wind dust storms on March 30 and April 27, 2010 and July 4 fireworks impacts in 2007, 2009, 2013 and 2017. The only exceedance identified as being due to wildfire in the Rose Park historical record is the September 6, 2017 data. Two other days in 2018 (August 4 and 11) also exceeded the NAAQS, and currently have not been flagged by Utah as exceptional events. Satellite imagery examined by the EPA suggests that these 2018 exceedances could also have been due to or impacted by wildfire smoke.

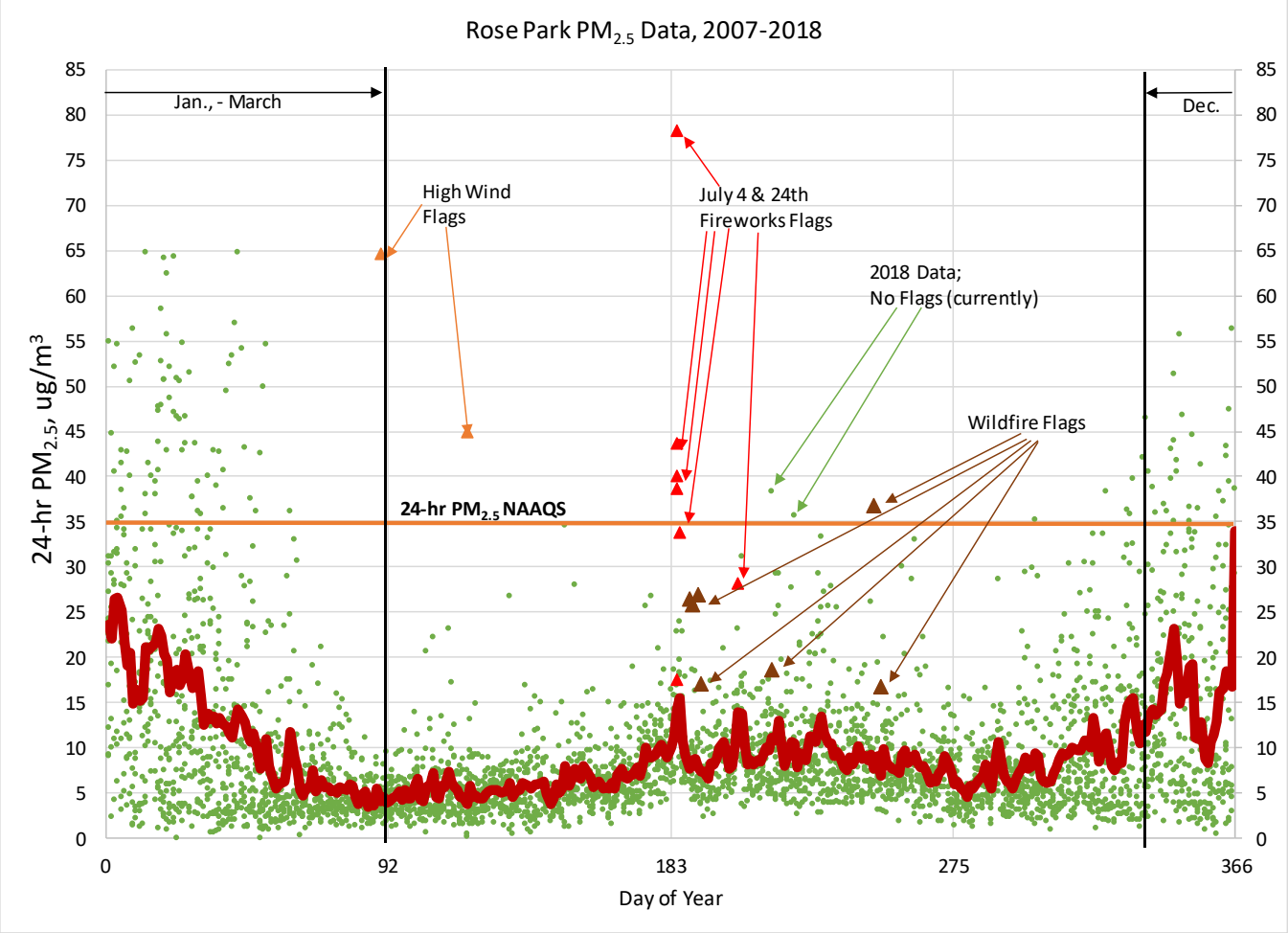

Figure 26. 24-hour average $PM_{2.5}$ concentrations at the Rose Park monitor (2007-2018); high wind flags orange; fireworks flags red; wildfire flags brown; daily mean $PM_{2.5}$ heavy red line.

In total, there have been nine warm season exceedances of the $PM_{2.5}$ NAAQS at Rose Park in the period 2007-2018: two attributed to high wind dust, three attributed to July 4 fireworks, two in 2018 of unidentified cause (but possibly wildfire) and one, on September 6, 2017 attributed to wildfire smoke.

In addition to these exceedances, there have been seven days in the period 2007-2018 where $PM_{2.5}$ during warm season conditions between March 1 and September 30 was between 30 and 35.4 $\mu g/m^3$ (non-exceedance values). In summary, there have been nine warm season exceedances and seven warm season near exceedances in the 12 years the Rose Park monitor has been operating, or about 1-1/3 exceedance or near exceedance values per year. All the historical warm season values over 30 $\mu g/m^3$ either have been claimed as exceptional events or are suspected to have been impacted by exceptional

event emissions. Looking at the mean values in Figure 26, July 4 and July 24 (Pioneer Day, another Utah holiday with traditional fireworks use) have the highest mean $PM_{2.5}$ values over the 12 years during summer months.

Based on the information presented above, DAQ's Clear Causal Relationship demonstration satisfies the requirements of the EER for the September 2017 event at the Rose Park monitoring site. In addition, the above discussion and historical data comparisons make it clear that although similar concentrations to those recorded in the 2017 event have been observed at Rose Park over the past 12 years, the high values are usually observed in the winter months or during summer smoke or other exceptional event impacts.

Not Reasonably Controllable or Preventable (NRCP)

The EER presumes that wildfire events on wildlands are not generally reasonable to control or prevent. The DAQ demonstration did not show that smoke-producing fires affecting the monitor were wildfires on wildlands, so the EPA researched and included the relevant information in this section.

As stated in the Narrative Conceptual Model section above, 2017 was a very active wildfire year in the northwestern United States and western Canada. After reviewing wildfire incident information for many of these wildfires, it is apparent that much of the fire occurred in public or otherwise wildland areas. To support this point, a selection of wildfires over 20,000 acres in size, and the affected wildland areas, are presented below in Table 1. Additional information on 2017 wildfires is available on InciWeb (https://inciweb.nwcg.gov/), which is an interagency all-risk incident information management system provided through The National Wildfire Coordination Group.

Table 1. Location, affected wildland areas, and ignition sources of select large wildfires (>20,000 acres) in 2017.

State or Province	Large Wildfire(s)	Affected Wildlands	Ignition Source
California	Modoc July Complex Orleans Complex Salmon August Complex	Modoc NF Marble Mountain Wilderness Marble Mountain Wilderness	Lightning Lightning Lightning
Idaho	Highline	Payette National Forest	Lightning
Montana	Rice Ridge Meyers Fire	Lola National Forest Beaverhead-Deerlodge National Forest	Lightning Lightning
Oregon	Chetco Bar Cinder Butte Whitewater	Rogue River–Siskiyou National Forest BLM Land Mount Jefferson Wilderness	Lightning Unknown Lightning
Washington	Diamond Creek Jolly Mountain Fire	Pasayten Wilderness Wenatchee National Forest	Unknown Lightning
British Columbia	Plateau	Chilcotin Plateau	Lightning

Natural Event

The definition of "wildfire" at 40 CFR 50.1(n) provides: "Any fire started by an unplanned ignition caused by lightning; volcanoes; other acts of nature; unauthorized activity; or accidental, human-caused actions, or a prescribed fire that has developed into a wildfire. A wildfire that predominantly occurs on wildland is a natural event." Table 1, and other available information (such as news articles and fire

statistics), indicate that most of the fires which contributed smoke to these events were indeed wildfires on wildlands, and therefore natural events by definition.

Schedule and Procedural Requirements

In addition to technical demonstration requirements, 40 CFR 50.14(c) and 40 CFR 51.930 specify schedule and procedural requirements an air agency must follow to request data exclusion. Table 2 outlines the EPA's evaluation of these requirements.

Table 2. Schedules and Procedural Criteria

Criterion	Reference	Details	Met Criterion
Did the agency provide prompt public notification of the event?	40 CFR 50.14 (c)(1)(i)	DAQ included details of the public outreach in the demonstration.	Yes
Did the agency submit an Initial Notification of Potential Exceptional Event and flag the affected data in the EPA's AQS?	40 CFR 50.14 (c)(2)(i)	Initial Notification for the September demonstration received February 2, 2019.	Yes
Did the initial notification and demonstration submittals meet the deadlines for data influenced by exceptional events for use in initial area designations, if applicable? Or the deadlines established by the EPA during the Initial Notification of Potential Exceptional Events process, if applicable?	40 CFR 50.14 Table 2 40 CFR 50.14 (c)(2)(i)(B)	The demonstration was submitted prior to the identification of a deadline.	Yes
Did the agency conduct the public comment process required?	40 CFR 50.14 (c)(3)(v)(A)	The demonstration included the public notice for the comment period.	Yes
Did the agency include with the demonstration all public comments received?	40 CFR 50.14 (c)(3)(v)(B)	The submittal letter indicated that no comments were received.	Yes

CONCLUSION

The EPA has reviewed the documentations provided by DAQ to support claims that smoke from numerous wildfires in the United States and Canada caused an exceedance of the 2006 24-hour $PM_{2.5}$ NAAQS at the Rose Park monitoring station on September 6, 2017. The EPA has determined that the flagged exceedance at this monitoring station on that day meets the definition of an exceptional event: the event affected air quality in such a way that there exists a clear causal relationship between the event

and the monitored exceedance, was not reasonably controllable or preventable, and meets the definition of a natural event. The EPA concurs with the exceptional event demonstration. However, any relevant, future proposed notice determining attainment and/or clean data will include the opportunity for the public to comment on our concurrence on this exceptional event, and the EPA will consider any comments received in our final action.